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EXAMINER
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MORRISON, THOMAS A

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/808,224  
Filing Date: March 23, 2004  
Appellant(s): TEO ET AL.

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Ms. Thi Dang  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 5/08/2008 appealing from the Office action mailed 12/14/2007.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

20060164491

Sakuma et al.

07-2006

Definition of "adjacent", Webster's II New Riverside University Dictionary (1984), pg. 78.

### **(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

#### **DETAILED ACTION**

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 18-22 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent Publication No. 2006/0164491 (Sakuma et al.).

Regarding claim 18, Figs. 1-8 show an inkjet printer (numbered paragraph [0046]) comprising:

a printhead (4) for printing a media sheet;

a front duplex module (including 10, 12, 11, 13, 14, 15, 26, 27, 22, 25, 1, 2, 30, 3, 5, 21, 28, 41, 42, 43, and 44) comprising: (i) a media path entry (near 22) where a media sheet to be printed can enter; (ii) a linefeed-roller assembly (including 13 and 27) configured to transport the media sheet entering the media path entry (near 22) toward the printhead (4) to enable printing on a first side of the media sheet; (iii) an output-roller assembly (elements 42 and 43, or alternatively, element 28) configured to advance the media sheet in a forward direction or to reverse the media sheet in a reverse direction,

wherein a simplex media path is defined between the linefeed-roller assembly (including 13 and 27) and the output-roller assembly (elements 42 and 43, or alternatively, element 28), and the printhead (4) is positioned downstream from the linefeed-roller assembly (including 13 and 27) along the simplex media path but upstream from the output roller assembly (elements 42 and 43, or alternatively, element 28); and

a back duplex module (including 51) detachably coupled (numbered paragraph [0067]) to the front duplex module (including 10, 12, 11, 13, 14, 15, 26, 27, 22, 25, 1, 2, 30, 3, 5, 21, 28, 41, 42, 43, and 44), the back duplex module (including 51) being configured to provide a single, unidirectional loop path for flipping the media sheet one time to thereby enable printing on a second side of the media sheet, wherein the loop path has an entry portion (near 23) that is positioned next to the media path entry (near 22) for receiving the media sheet from the front duplex module (including 10, 12, 11, 13, 14, 15, 26, 27, 22, 25, 1, 2, 30, 3, 5, 21, 28, 41, 42, 43, and 44) and an exit portion (below 22) that is aligned to the simplex media path,

wherein the front duplex module (including 10, 12, 11, 13, 14, 15, 26, 27, 22, 25, 1, 2, 30, 3, 5, 21, 28, 41, 42, 43, and 44) and the back duplex module (including 51) are configured to provide a duplex media path that includes the loop path, and a duplex path entry (near 25) that is positioned adjacent to the output-roller assembly (elements 42 and 43, or alternatively, element 28) but downstream (i.e., downstream in the reverse feeding direction to the left in Fig. 1) from the printhead (4) so as to enable a trailing edge of the media sheet to enter the duplex media path, and

wherein a portion of the linefeed-roller assembly (including 13) is positioned adjacent to the duplex media path such that, after the trailing edge of the media sheet entered through the duplex path entry (near 25), the trailing edge must bypass the portion of the linefeed-roller assembly (including 13) and the media path entry (near 22) before entering the loop path.

Regarding claim 19, Figs. 1-8 show that the linefeed-roller assembly (including 27) and the output-roller assembly (28) are coupled to each other to provide a coordinated control for handling the media sheet.

Regarding claim 20, Figs. 1-8 show that the back duplex module (including 51) comprises a duplex roller (42 or 28) arranged to advance the media sheet along the loop path toward the linefeed-roller assembly (including 13 and 27).

Regarding claim 21, Figs. 1-8 show that the back duplex module (including 51) comprises two duplex rollers (28 and 42) arranged to advance the media sheet along the loop path toward the linefeed-roller assembly (including 13 and 27).

Regarding claim 22, Figs. 1-8 show that the front duplex module (including 10, 12, 11, 13, 14, 15, 26, 27, 22, 25, 1, 2, 30, 3, 5, 21, 28, 41, 42, 43, and 44) further comprises a pair of transfer rollers (22 and 25) arranged along the duplex media path to advance the media sheet along the duplex media path.

#### **(10) Response to Argument**

**Claims 18-22 are not patentable over U.S. Patent Publication No.**

**2006/0164491 (Sakuma et al.).**

Appellants argue

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Claim 18 recites an inkjet printer in which "the printhead is positioned downstream from the linefeed-roller assembly along the simplex media path but upstream from the output roller assembly" (emphasis added). In other words, the output-roller assembly is "downstream" from the printhead along the simplex media path as disclosed in the Specification, page 7, first full paragraph, and shown in Fig. 3A. Claim 18 further recites "a duplex path entry that is positioned adjacent to the output-roller assembly but downstream from the printhead so as to enable a trailing edge of the media sheet to enter the duplex media path" (emphasis added). In contrast, Sakuma discloses a duplex media path that is different from that of Appellants.

Sakuma discloses a duplex system in which "the duplex paper feed unit 51 receives (captures) the sheet of paper 12 conveyed in the direction opposite to the belt conveying direction (in the Y1 direction in FIG. 1) by the reverse rotation of the conveying belt 21" (page 5, paragraph 66). In Sakuma's system, the paper is being reversed along the same convey path ( $Y_1$ -  $Y_2$ ) during duplex printing, bypassing the recording head 4 again, in order for the paper to enter the duplex unit 51 (paragraph [0079]. This point of entry to the duplex path is far away from the ejection rollers (42, 43), i.e., not adjacent to the ejection rollers (42, 43). As such, the duplex path in Sakuma's apparatus is not the same as that recited in claim 18. In Appellants' system, the paper is being reversed during duplex printing into a path that is different from the simplex path, and the paper does not bypass the printhead again prior to entering the duplex unit. In fact, Sakuma's duplex system is similar to the conventional duplex system shown in FIG. 1 of Appellants' specification. As discussed in the background section of the present application, the conventional duplex system shown in FIG. 1 suffers from not being able to print all the way to the trailing edge (Appellants' specification: page 2, first paragraph).

The Final Office Action stated on page 5:

"It is important to note that the examiner relies upon the direction that the sheet travels to determine what is "upstream" or "downstream"...When the sheet is travelling to the right along the simplex path, the sheet is going "upstream" to the right. On the other hand, when the sheet is travelling m the left along the duplex path, the sheet is going "upstream" to the left." Based on this interpretation of the terms "upstream" and "downstream", the Examiner contended that the limitations of claim 18 are met by Sakuma. However, the Examiner's interpretation of the terms "upstream" and "downstream" is contrary to what Appellants already define in clam18 and in the specification as "upstream and "downstream."

Claim 18 recites: "the printhead is positioned downstream from the linefeed-roller assembly along the simplex media path but upstream from

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the output roller assembly. As such, what are considered “downstream” and “upstream” along the simplex path have been defined.

With regard to the limitation “a duplex path entry that is positioned adjacent to the output-roller assembly but downstream from the printhead so as to enable a trailing edge of the media sheet to enter the duplex media path,” the Examiner contended that the duplex path entry (near 25) of Sakuma is positioned “adjacent” to (i.e. close to or nearby) the output-roller assembly (42,43) (page 7 of Final Office Action). However, the Examiner's interpretation of how this limitation is met by Sakuma is not reasonable. The ejection rollers (42,43) of Sakuma cannot be “*adjacent*” to the duplex path entry (which is next to roller 25), as recited in claim 18, when the recording head 4 is positioned between roller 25 and the ejection rollers (42,43). As defined in claim 18 and shown in Fig. 3A of Appellants' drawings, the printhead (306) of Appellants' system cannot be positioned between the duplex path entry (326) and the output-roller assembly (310) along the simplex media path (324).

Furthermore, it is submitted that Sakuma's duplex path entry (next to roller 25) is not “*downstream*” from recording head 4 as defined by claim 18.

Again, what is considered “*downstream*” has already been defined in claim 18.

Office personnel must rely on the applicant's disclosure to properly determine the meaning of the claims. *Markman v. Westview Instruments*, 52 F.3d 967, 980, 34 USPQ2d 1321, 1330 (Fed. Cir.)(*en banc*), *aff'd*, U.S., 116 S. Ct. 1384 (1996). Office personnel are to give claims their broadest reasonable interpretation in light of the supporting disclosure. *In re Morris*, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027-28 (Fed. Cir. 1997).

In the present case, it is submitted that the Examiner's interpretation of claim 18 is not *reasonable* based on the claim language and what is disclosed in Appellants' specification.

Appellants' allegation that Sakuma et al. does not disclose an inkjet printer in which “the printhead is positioned downstream from the linefeed-roller assembly along the simplex media path but upstream from the output roller assembly” is **without merit**. (emphasis added). In particular, Sakuma et al. discloses a printhead (4) positioned downstream from a linefeed-roller assembly (including 13 and 27) along a simplex media path but upstream from an output roller assembly (elements 42 and 43, or alternatively, element 28), as claimed.



Moreover, Appellants' allegation that Sakuma et al. does not disclose "'a duplex path entry that is positioned adjacent to the output-roller assembly but downstream from the printhead so as to enable a trailing edge of the media sheet to enter the duplex media path" is **without merit**. (emphasis added). In particular, Sakuma et al. discloses a duplex path entry (near 25) that is positioned adjacent to the output-roller assembly (elements 42 and 43, or alternatively, element 28) but downstream (i.e., downstream in the reverse feeding direction to the left in Fig. 1) from the printhead (4) so as to enable a trailing edge of the media sheet to enter a duplex media path, as claimed.

For clarification, the operation of the Sakuma et al. apparatus is explained below. **It is important to note that the examiner relies upon the direction that the sheet travels to determine what is "upstream" or "downstream".**

The simplex path of Sakuma et al. (i.e., path for printing on only one side of a sheet) starts near element 14 and goes up past element 22, and then over to the right through elements 25 and 43. See e.g., Figs. 1-8 and numbered paragraphs [0051], [0052] and [0066] of Sakuma et al. For printing on only one side of the sheet (simplex printing), the Sakuma et al. apparatus ejects the sheet onto a paper ejection tray (44) via the output roller assembly (element 42 and 43, or alternatively, element 28) after the printhead 4 prints on the first side of the sheet.

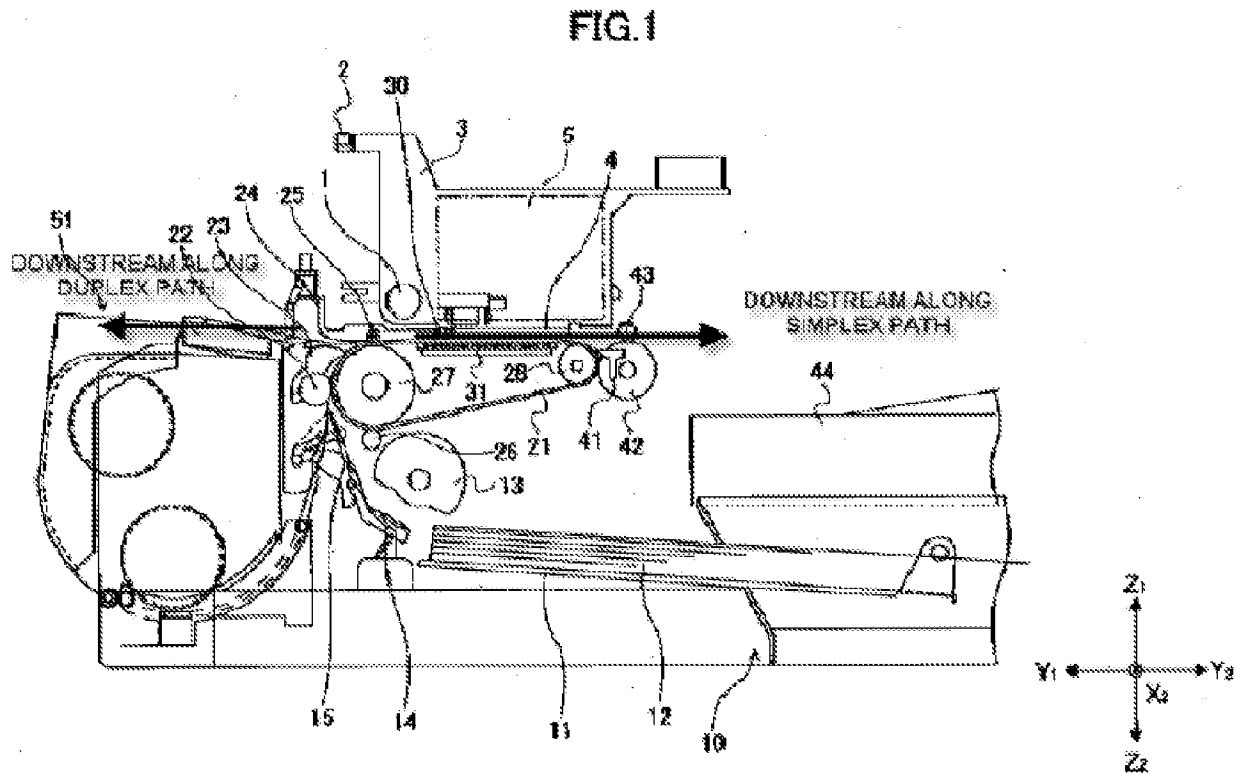
For duplex printing (printing on both sides of the sheet), the Sakuma et al. apparatus first conveys the sheet through printhead (4) via element 21 to print the first side of the sheet, as explained above for simplex printing. Then, without ejecting the sheet, the Sakuma et al. apparatus reverses the rotation direction of element 21 and

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conveys the sheet over to the left into a back duplex module (51) to flip the sheet and convey the sheet back to elements 22 and 21 so that the sheet can be fed back up to feedhead 4 to print on the second side of the sheet. After printing on the second side of the sheet, the Sakuma et al. apparatus ejects the sheet via the output roller assembly (elements 42 and 43, or alternatively, element 28) onto the paper ejection tray (44).

See e.g., Figs. 1-8 and numbered paragraph [0067] of Sakuma et al.

The examiner takes the position that the duplex path includes a duplex path entry (near 25) to the back duplex module 51 (i.e., a section of the Sakuma et al. apparatus where the sheet enters the back duplex module 51), and then the duplex path extends over to the left through the loop path in the back duplex module 51 and finally continues up to the point where the duplex path meets up with the simplex path (near 22). See e.g., numbered paragraph [0067] and Figs. 1-8 of Sakuma et al. As such, the sheet travels over to the right along the simplex path, but travels over to the left along the duplex path. This changes the way that the terms "upstream" and "downstream" are interpreted.



When the sheet is traveling to the **right** along the **simplex path**, the sheet is going "**downstream**" to the right. On the other hand, when the sheet is traveling to the **left** along the **duplex path**, the sheet is going "**downstream**" to the left. Thus, there is no inconsistency in saying that the sheet travels to the right (i.e., downstream) along the simplex path, and this same sheet travels to the left (i.e., downstream) along the duplex path. With this in mind, Fig. 1 of Sakuma et al. shows that the printhead (4) is positioned **downstream** (i.e., upward and to the **right**) of the linefeed-roller assembly (including 13 and 27) along the **simplex media path** but **upstream** (i.e., to the **left**) of the output roller assembly (elements 42 and 43, or alternatively, element 28) along the simplex path. Accordingly, the printhead is positioned downstream from the linefeed-

roller assembly along the simplex media path but upstream from the output roller assembly, as now set forth in claim 18.

Fig. 1 of Sakuma et al. also shows that the duplex path entry (near 25) to the back duplex module 51 is positioned adjacent to the output-roller assembly (elements 42 and 43, or alternatively, element 28) but **downstream** (i.e., to the **left** in the duplex path) of the printhead (4) so as to enable a trailing edge of the media sheet to enter the duplex media path. As mentioned directly above the annotated Fig. 1, the examiner takes the position that the duplex path includes the duplex path entry (near 25) to the back duplex module 51 (i.e., the section of the Sakuma et al. apparatus where the sheet enters the back duplex module 51), and then the duplex path extends over to the left through the loop path in the back duplex module 51 and finally continues up to the point where the duplex path meets up with the simplex path (near 22). See e.g., numbered paragraph [0067] and Figs. 1-8 of Sakuma et al. Appellants have **not** defined the recited “duplex path entry” as being downstream of the printhead in the simplex path in claim 18. **Rather, the term "downstream" in claim 18 is left open for interpretation.**

After the Sakuma et al. apparatus conveys the sheet “downstream” to the right along the simplex path to print the first side of the sheet, the Sakuma et al. apparatus then reverses the rotation of element 21 and conveys the same sheet backwards (i.e., to the left) to the duplex path entry (near 25) of the back duplex module 51. As such, **the term “downstream” refers to movement of the sheet to the left**, rather than movement of the sheet to the right after the rotation of element 21 is reversed to feed the sheet in the duplex path. Thus, the “duplex path entry” (near 25) of the back duplex

module 51 is adjacent to the output-roller assembly but “**downstream**” (e.g., **to the left of the sheet that is being conveyed to the left by element 21 during reverse rotation of element 21**) from the printhead so as to enable a trailing edge of the media sheet to enter the duplex media path, as now set forth in claim 18. Thus, all of the limitations of claim 18 are met by U.S. Patent Publication No. 2006/0164491 (Sakuma et al.).

As mentioned in the arguments directly above, Appellant’s allegation that Sakuma et al. does not disclose “a duplex path entry that is positioned adjacent to the output-roller assembly but downstream from the printhead so as to enable a trailing edge of the media sheet to enter the duplex media path” is **without merit**. With regard to appellants’ argument that the duplex path entry (near 25) is not positioned **adjacent** to the output-roller assembly, it is noted the dictionary defines the term “adjacent” as “1. Close to: NEARBY <the house and adjacent pond>”. See Webster’s II New Riverside University Dictionary (1984), at page 78. Keeping this broad definition of the term “adjacent” in mind, it is the examiner’s position that Fig. 1 of the Sakuma et al. publication shows a duplex path entry (near 25) that is positioned adjacent to (i.e., close to or nearby) the output-roller assembly (elements 42 and 43, or alternatively, element 28). For example, the duplex path entry (near 25) of the back duplex module 51 is positioned adjacent to (i.e., close to or nearby) the output-roller assembly (elements 42 and 43, or alternatively, element 28). Thus, all of the limitations of claim 18 are met by U.S. Patent Publication No. 2006/0164491 (Sakuma et al.).

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**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Thomas Morrison /Thomas Morrison/

/Patrick H. Mackey/

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